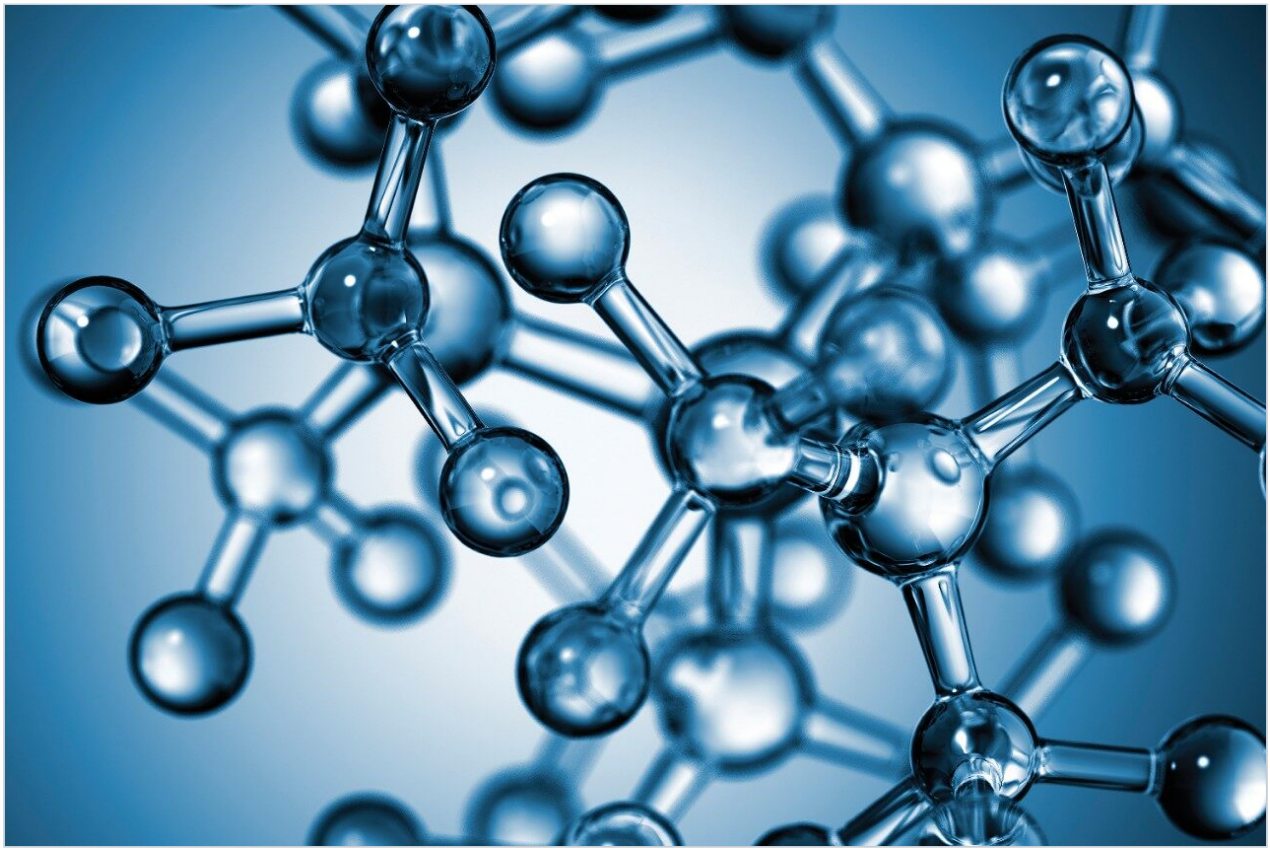
Waters™

Nota applicativa

Phenone Mixture

Waters Corporation



This is an Application Brief and does not contain a detailed Experimental section.

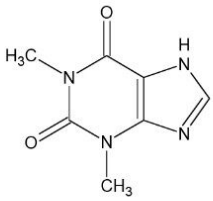
Abstract

This application brief demonstrates analysis of phenone mixture using Sunfire C_8 and C_{18} Columns.

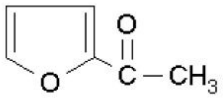
Introduction

The compounds analysed in this study using Sunfire C_{18} Columns are -

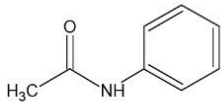
Compounds	USP tailing
1. Theophylline	1.31
2. 2-Acetylfuran	1.15
3. Acetanilide	1.16
4. Acetophenone	1.18
5. Propiophenone	1.14
6. Butyrophenone	1.13
7. Benzophenone	1.13
8. Valerophenone	1.15
9. Hexanophenone	1.06
10. Heptanophenone	1.10
11. Octanophenone	1.06



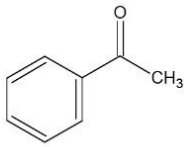
Theophylline



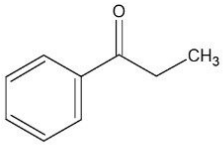
2-Acetylfuran



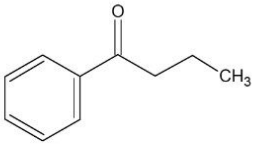
Acetanilide



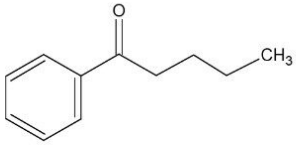
Acetophenone



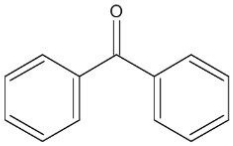
Propiophenone



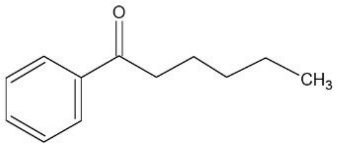
Butyrophenone



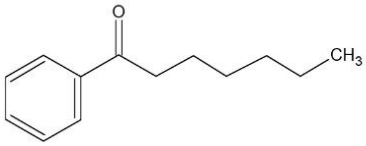
Valerophenone



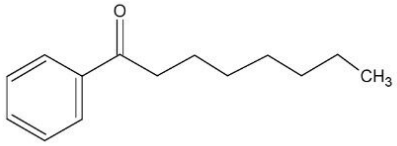
Benzophenone



Hexanophenone



Heptanophenone



Octanophenone

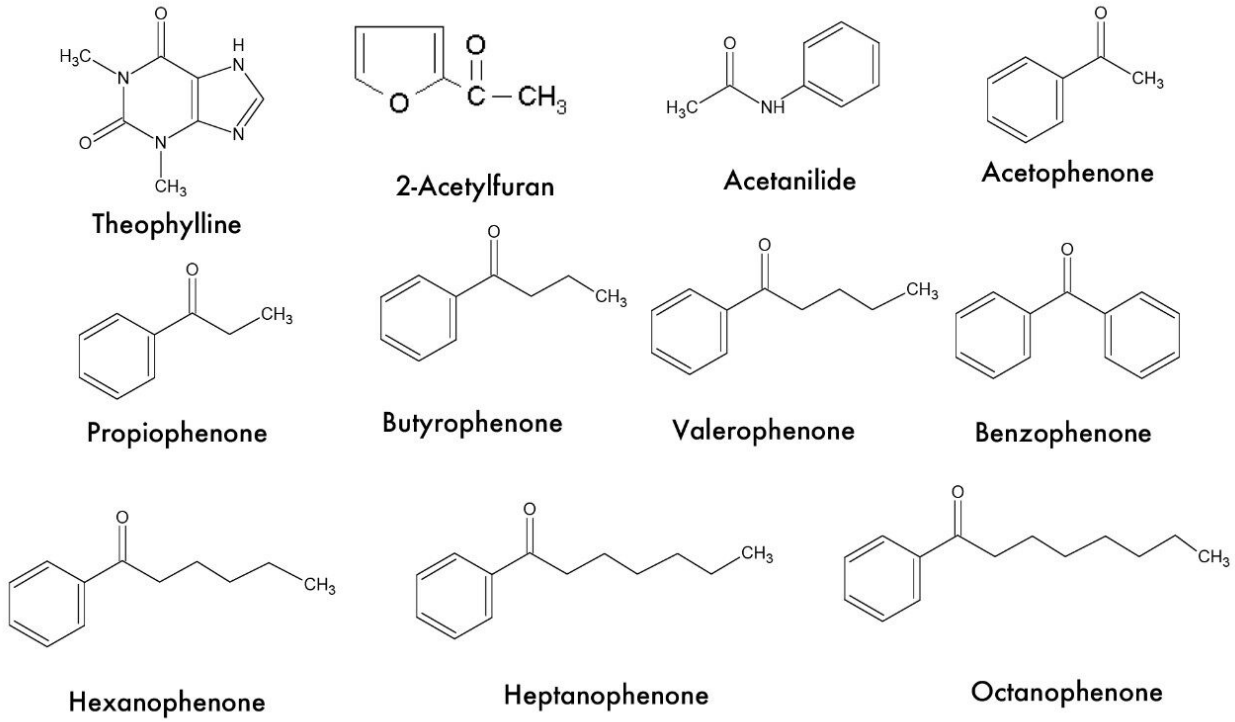
II compound mixture of phenones separated in under 4 minutes with SunFire C_{18} IS Column.

The compounds analysed in this study using Sunfire C_8 Columns are -

Compounds	USP tailing
1. Theophylline	1.17
2. 2-Acetylfuran	1.06
3. Acetanilide	1.07
4. Acetophenone	1.02
5. Propiophenone*	1.00
6. Butyrophenone*	0.87
7. Benzophenone*	0.99
8. Valerophenone*	1.02
9. Hexanophenone*	0.99
10. Heptanophenone*	0.93
11. Octanophenone*	1.03

*stock solution prepared in acetontrile

**: stock solution prepared in acetontrile*



II compound mixture of phenones separated in under 4 minutes with SunFire C_8 IS Column.

Experimental

Conditions

Column:	SunFire C_{18} 4.6 x 20 mm *IS*, 3.5 µm
Part number:	186002549
Mobile phase A:	0.1% HCOOH in Water
Mobile phase B:	0.1% HCOOH in ACN
Flow rate:	3.0 mL/min

Injection volume:	10 µL
Sample concentration:	10 µg/mL in water
Temperature:	30 °C
Detection:	UV @ 254 nm
Instrument:	Alliance 2695 with 2996 PDA

Gradient

Time (min)	Profile	
	%A	%B
0.0	100	0
4.0	0	100

Conditions

Column:	SunFire C_8 4.6 x 20 mm *IS*, 3.5 µm
Part number:	186002699
Mobile phase A:	Water
Mobile phase B:	Acetonitrile
Mobile phase C:	1% HCOOH in Water
Flow rate:	3.0 mL/min
Injection volume:	10 µL

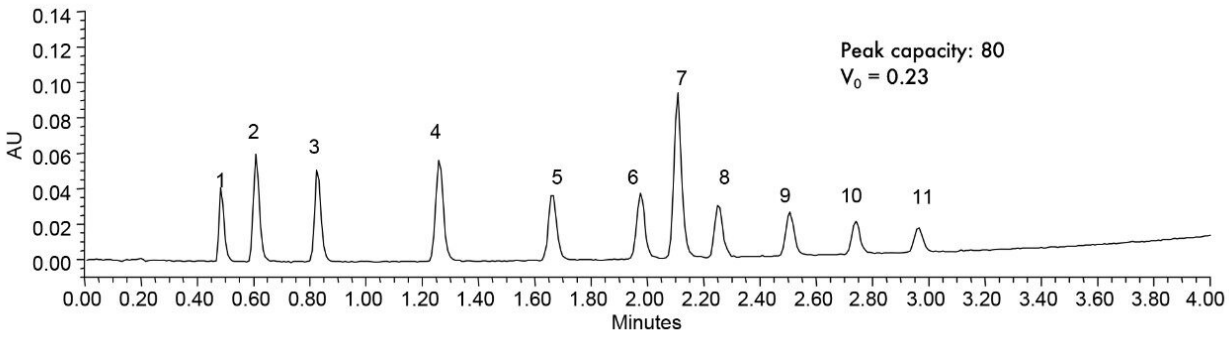
Sample concentration:	10 µg/mL in water
Temperature:	30 °C
Detection:	UV @ 254 nm
Instrument:	Alliance 2695 with 2996 PDA

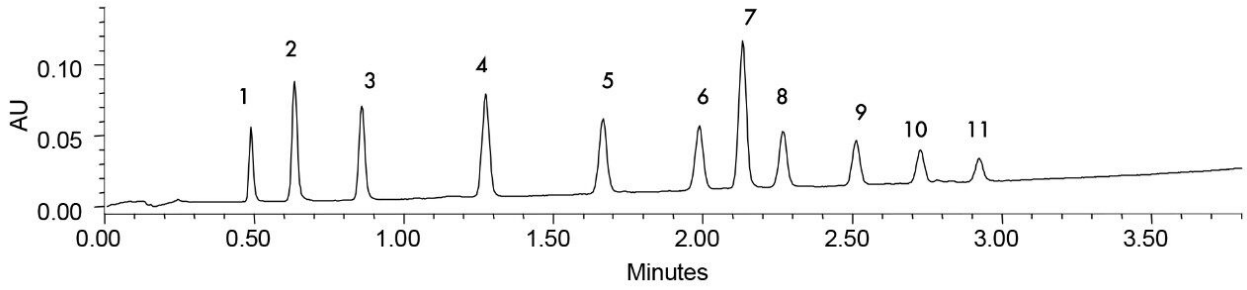
Gradient

Time (min)	Profile		
	%A	%B	%C
0.0	90	0	10
4.0	0	90	10

Results and Discussion

Compound mixture of phenones separated in under 4 minutes with SunFire *IS* Column.





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